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Information and Communication Development in Indonesia (Country Report): Role of ICT in Bridging the Digital Divide in Selected Underserved Areas and Remote Regions

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**INFORMATION AND COMMUNICATION DEVELOPMENT
IN INDONESIA
(Country Report)**

**Role of ICT in Bridging the Digital Divide in Selected Underserved Areas and Remote
Regions**

**Prepared for the World Summit for Information Society (WSIS 2003)¹
Geneva, Switzerland**

I. Introduction

Sustainable development cannot occur in Indonesia without technological progress in ICTs and their appropriate application. Recent democratic reforms and the associated change of paradigm that are currently taking place greater demand for transparency and openness. The public expect speedy implementation of democratic practice, decentralization of government and “good governance” practices at all levels of government. In this context, the Government of Indonesia (GoI) realizes that ICT potential allows for a greater availability of information for all and can facilitate the people’s right to obtain information that is indispensable. The Ministry of Communications and Information (MCI or KOMINFO) has been given the responsibility to coordinate the dissemination of ICTs for national development and culture.

The development of info-com technologies including the Internet in Indonesia is no doubt in line with the objectives of the **World Summit on Information Society**. At the same time, the need to develop ICTs can said also to be critical for Indonesia in keeping up with the development of its trading partners in the ASEAN and Asia-Pacific regions. In addition, globalization of the electronic and print media led us to become increasingly aware of the potential benefits of ICTs as a tool for nation building and society’s empowerment in the digital era.

II. Initiatives taken by Indonesia in line with the Major Programmes of World Summit on Information Society

Several steps have been taken in Indonesia to bridge the Digital Divide and to bring into reality the goals of Information and the Knowledge-based society. GoI undertook initiatives, including various programmes, which were supported by WSIS, in cooperation with the business sector, educational institutions, and community organizations. In recent years, GoI instituted a number of bold policy initiatives designed to promote e-leadership and to bring about reform through ICT deployment. As the telecommunication, media and information technologies are converging, Indonesia is also in the process of streamlining relevant regulations and institutions to effectively manage the operations and policies in the ICT related sectors.

In this context, Indonesia reaffirms full support for all WSIS programmes and efforts especially in promoting digital opportunity. The following are some key initiatives as well as efforts that have been undertaken in line with the WSIS’s major programmes:

¹ Prepared for WSIS 2003 by Drs. Akmam Amir, Asst. Deputy for ICT Network Development, Ministry of Communications and Information, Republic of Indonesia, and Dr. Idris F. Sulaiman, Economist and ICT Advisor, PEG Project, in September 2003. The Partnership for Economic Growth (PEG) is a United States Agency for International Development (USAID)-funded Project with the Government of Indonesia. The views expressed in this report are those of the authors and not necessarily those of USAID or the U.S. Government.

1. Fostering equitable access to information and knowledge for development.

Fostering actions to reduce digital divide and promote social inclusion include:

- a. Encourage the R & D institutions as well as government and private institutions to develop their own websites and providing them with links to related institutions.
- b. Strengthening the capacity of communication and information professionals as well as institutions by encouraging them to produce as much as possible the results of research in the digital form using CD-ROM, in other medium storage and on the Internet. Information content such as government reports and publications, literature, research reports, local knowledge, local resources, resources useful to Small and Medium Enterprises (SMEs), regulations, R&D and commercial profiles can be developed in digital forms of text, sound and video that can be programmed into scientific, community or business data bases, images sound recording collections and other multi-media library collections.
- c. In order to enhance the broader diffusion of ICT for the people, GoI issued several Decrees and Instructions:
 - Presidential Instruction No. 2/2001 (February 21, 2001) concerning the **Utilization of the Indonesian language** (“Bahasa Indonesia”) for Computer Applications,
 - Presidential Instruction No. 3/2001 (March 9, 2001) concerning the **Development of Appropriate Technologies** to accelerate the development of SMEs,
 - Presidential Instruction No. 6/2001 (April 2001), concerning Development of Telecommunication, Media, and Informatics (*Telematika*) in Indonesia, a **five-year National Information and Communications Technology (ICT) Action Plan** for Indonesia.
 - MCI work resulted in **Presidential Decree No. 9/2003 concerning the ICT Coordinating Team (TKTI)**.
 - MCI work resulted in **Presidential Instruction No. 3/2003 concerning National Policy on E-Government Development**.
 - On **Internet promotion**, MCI launched the GoI website www.indonesia.go.id in April 2002 and since then MCI has coordinated several national ICT promotional campaigns in various regional capitals with the IT industry associations. The most recent promotion was the ICT Month in August 2003 where national awards were given by the President, MCI and several private sector organizations. There is now a greater use of Internet by various central and regional (including Provincial and District) government agencies is now evident and most of the electronic and print media outlets have now established their Website facilities. Some media establishments do now broadcast their daily programmes through the Internet. For example, the **national “Radio Republik Indonesia” Internet broadcast** can now be accessed from anywhere around the world.
 - On **Cybersecurity and Counter-Cybercrime measures**, MCI established the ICT Security Task Force (ICT-TF) chaired by the Deputy Minister on Network Infrastructure Development, MCI. He is tasked to coordinate the design and implementation of MCI's first Memorandum of Understanding (**MoU on Cybersecurity with the Economic, Special and IT Crime Division of the Indonesian National Police (POLRI)**). In order to improve the awareness and response mechanisms of cybercrime incidents, MCI jointly events, which were, sponsored jointly with POLRI, the Federation of IT Industry Associations (FTII) and its cybersecurity policy forum (called SECURE-INDONESIA-FIRST.OR.ID).

- To be able to fully tap the benefit of ICTs for the economic and social development in the country, Indonesia is working to have **a substantive legal and regulatory framework for ICTs** that will provide a strong base for e-commerce, e-government and other transactions involving the Internet and ICTs. Corresponding procedural laws, implementation procedures or policies of such a ICT legal framework require coordination and development programme formulation involving public and private organizations, as well as, ICT user community, women and other community organizations must take an active role in the design, realization and implementation of a such a framework. For that purpose, the government has finalized the preparation of a new Cyberlaw Draft, which is called “Electronic Information and Transactions Law”.
- d. In line with WSIS’s target in improving accessibility, community access points or multipurpose community telecenters (MTCs) especially in rural villages and remote areas, GoI has been facilitated or developed several initiatives such as:
- **Technology Information Kiosks (WARINTEK) Programme** developed by the Indonesian Institute of Sciences (LIPI) and The Ministry of Research and Technology (RISTEK). The basic idea is to empower people through information through 2 CD-ROMs which contain thousand of full text information regarding appropriate technologies for agriculture, fisheries, animal husbandries, food technologies, medicine plants, traditional medicine, food, beverages, and culinary recipes have been published and distributed to all districts and sub-districts, universities, and schools in Indonesia. Another 6 CD ROMs have been produced to contain bibliographic information (meta data) from more than 60 leading libraries in Indonesia, and more than one million informative data are also recorded. These CD-ROMs contains information in the form of animation on Science & Technology suitable also for children use.
 - **Information Kiosk (WARSI) Programme** developed by the Ministry of Industry and Trade (INDAG) in order to empower SMEs.
 - **Business Information Center (BIC) Programme** developed by the Chamber of Commerce (KADIN).
 - **Community Teleservice Center (BIM) Programme** developed by the Indonesian Information and Communication Society (MASTEL).
 - **Indonesian Community Electronic Information Network (JIMIE) Programme** developed by National Information Agency, Ministry of Communications and Information (LIN-KOMINFO).
 - **Women and Community Tele-Center (WCTC) Programme** developed by a three-way collaboration between several regional governments, local women groups and the private sector.
- g. To provide a long-term vision for the development of ICTs in Indonesia, GoI has formulated the **National Information System Conceptual Framework** (“Konsep Pengembangan Sistem Informasi Nasional - **SISFONAS 2010**”). This framework will provide the guideline for the National and regional governments organizations in developing their infrastructure and information systems. The related implementation

program called the **“e-Indonesia Program”** puts the priority on digitizing all the transactions and information system for the **National General Election Committee (KPU) Information System Program for General Election** on the year 2004, the **National Cabinet (e-Cabinet) Program** and the **Financial System Program (e-Finance)**.

- h. In another Bridging the Digital Divide initiative, GoI is preparing the **“One School One computer’s Laboratory (OSOL)” Program** for all schools in Indonesia.
- i. In pursuance to Tokyo Declaration that all states have connected to telecommunication network in the 2005, GoI is endeavoring to enhance public access to fixed line telephone in every village in Indonesia. **Rural Telecommunication Infrastructure Development (TID) Program** is currently being formulated through the **Universal Service Obligation (USO) subsidies** for 870 Sub-Districts and 43,022 currently unconnected villages of the total of 66,778 villages in Indonesia. The TID Program is to deliver its target by the end of 2005. In addition to this TID/USO Program will also enhance access to the Internet and ICTs through the **Public Service Obligation (PSO) Program** for public access for services provided by e-Government programmes.
- j. In the mean time, a **public-private sector coalition of 26 entities have launched in June 1, 2003, multimedia distance learning initiative** that offers a 24-hour parliamentary service and education broadcast via television, audio and data (later available in January 2004). Currently, this initiative will be used as a pipeline for education to the regional areas with 2000 education centers which will be able to received educational content. The basic objective is to decentralize education.
- k. Other complementary initiatives are being planned to supply distant teacher training, e-Health and e-Government education, services, data centers and other applications.
- l. GoI recently co-sponsored the Survey of Internet Kiosks in 5 Principal Cities and assisted with the production of the **“Secure and Sustainable Telecenter CD-Handbook”** which can provide policy and practical guide on the development of Community Telecenters (CTCs) for **PSO programmes** to be developed by the regional and national government. For example, such CTC resource could be useful for 2 pilot projects that MCI currently promote in Mimika, Papua Province and in Entekong Sub-District, West Kalimantan Province. Prior to the setting up of the MCI, the ICT Coordinating Team (TKTI) led the discussions on **expanding public ICT access through Community Telecenters (CTCs) and the need for the development of ICT access in Remote and Regional areas**. In June 2002, TKTI organized a National Dialog on CTC and ICT public access and in September 2001, PEG project organized the first Jakarta-Washington video-conference on these issues.
- m. In August 2003 during the National ICT Month, in line with greater GoI interest in expanding telecommunications **Universal Services Obligation (USO) and ICT Public Services Obligation (PSO)**, MCI co-organized the Seminar on ICT Empowerment and the second Jakarta-Washington video-conference on CTCs during the National ICT Month promotion in August 2003.
- n. To enhance public service broadcasting, the content of **WARINTEK database** mentioned above has been used as the content for Radio programmes, especially private and local radio stations. For example, UNESCO Jakarta and MRT develop

radio programmes various local radios in North Sumatra, West Kalimantan and East Java provinces.

- o. **Ministry of National Education (MNE)** in collaboration with **Ministry of Communication and Information (MCI)** as well as other private and academic stakeholders have raised the awareness for the need for and develop e-learning facilities. **ASPnet (Associate School Project Network)** within the UNESCO framework has also been developed in Indonesia in collaboration with the **One School One Computer's Lab (OSOL)** Programme within Indonesia.
- p. To promote **ICT enhanced-learning, computer networking with Cisco module** has been developed in more than 20 universities and in more than 5 high secondary schools in 2003. This programme will be further expanded to more than 30 universities by the end of 2004.
- q. To enhance ICT-literacy, various **awareness ICT promotion campaign events such as the annual National ICT Promotional Month** (at the month when the National Independence is celebrated) have been held with various awareness raising campaign in various electronic and print media (as well as on the Internet media) together with the offer of various ICT training programmes carried out by the GoI and various private and community ICT associations.
- r. On **Internet promotion**, MCI launched the GoI website www.indonesia.go.id in April 2002 and since then MCI has coordinated several national ICT promotional campaigns in various regional capitals with the IT industry associations. The most recent promotion was the ICT Month in August 2003 where national awards were given by the President, MCI and several private sector organizations. There is now a greater use of Internet by various central and regional (including Provincial and District) government agencies is now evident and most of the electronic and print media outlets have now established their Website facilities. Some media establishments do now broadcast their daily programmes through the Internet. For example, the national "Radio Republik Indonesia" Internet broadcast can now be accessed from anywhere around the world.

2. Promoting Freedom of Expression, Independence and Pluralism of the Media

- a. These initiatives involve the adoption of a series of government legislations such as the amendment of the Republic of Indonesia's Constitution, in which freedom of expression and freedom to access public information have been adopted as part of basic human rights. In GoI through the Ministry of Communications and Information (MCI) has successfully passed the **Broadcasting Law No.32/2002** which regulates the overseeing of broadcasting affairs through **the Indonesian Broadcasting Commission (KPI)** that is in process of being established. As an independent agency, the *KPI* regulates on broadcasting issues such as ensuring a supportive climate for investment and competition among broadcasting corporations and related industries. The KPI also collects information, investigates and responds to complaints from the public.
- b. Meanwhile, Indonesia has enacted the **Law No 40 of 1999 concerning the Press** and regulates the conduct of print, electronic and other media (including the Internet). The aim of the Law is to develop a conducive environment for the national press to grow where the right to seek, obtain, and disseminate ideas and information is respected. In the post-Suharto era, this Law heralded a change of media practice which is

supportive for the development of democracy and cultural diversity and multilingualism in Indonesia. However, there are some negative impacts caused by euphoria of the freedom and insufficient professionalism in this field due to the lack of adequate libel laws and other regulatory provisions. To ensure the freedom to obtain public information, the GoI is preparing a draft of the **Law concerning Freedom of Access to Public Information, which** will be discussed by the Parliament in due course.

III. The Challenges

Despite of significant progress in the development and use of information and communication technologies, Indonesia is still concerned with the **growing Digital Divide**. There are divides that are growing between Indonesia and other neighboring countries, between the ICT “haves” and “have-nots” separated by location, income, gender as well as the disabled and other marginalized groups in society.

Notwithstanding Indonesia’s recent economic crisis of 1998 which has provided a break on **infrastructure development especially in telecommunication and electricity in rural areas**, the current buoyant economic growth is giving another impetus for ICT development. However, the cost for telecommunication and access to Internet is still not yet affordable for most of rural communities in Indonesia.

In terms of **human resources, the main problems of high rates of illiteracy and ICT access-mastery-content issues in the rural regions** provide fundamental barriers to participate in knowledge societies. Many rural and remote communities are still placing greater importance on traditional communications human networks and radio rather than ICT-multimedia forms of communication.

Together with bi-lateral and multilateral donor agency activities, a more pro-active GoI promotional programme can be expected in 2004 and beyond with the implementation of USO programme and with the expected further improvements in regulatory and policy framework. There is a greater commitment by GoI to facilitate greater competition in the telecommunications sector by the recent establishment of an independent telecommunications regulatory. The incumbent and next incoming government will no doubt continue the above USO programme after 2004 when the elections are being planned so that there is greater scope for expanding public ICT access in the longer term.

There is little doubt that in facilitating greater public ICT access **GoI must face the related challenges in facilitating ICT mastery and local content as well as assist people to cross the English language barrier** should they require it. Currently, there is a marked shortage of relevant material in local languages that respond to local needs.

Indonesia is yet to build a **national Internet gateway**, although the Indonesian Internet Exchange has been established by the Indonesian ISPs through an initiative that connect every ISP. Nevertheless, GoI is formulating a plan which will establish a central point for all information requirements for regional governments from province, regency down to city or sub-regency level organized by the National Government which will include data center, network and information structure as well as relevant applications for government and business processes.

Such centralization of ICT activities can mitigate imbalances of access to information and ICT tools. Such imbalances provide challenges in creating knowledge-based societies

and these challenges are faced not only by Indonesia but also by other developing countries. Perhaps issues relating to the centralization of ICT activities while attempting to empower remote and rural communities can be made as priority issues for WSIS programmes.

Another area that can be identified as a major challenge for WSIS is how to deal with questions relating to **freedom of the Press and the regulation of Internet and other media content** and its related ICT-multimedia nexus. Change in political order after the economic crisis of 1997-98 has altered the role of the media and the Press practices in Indonesia. The media has to become much more open, competitive and relatively free of censorship. Such change has benefited the growth of democracy in the country. However, on the other hand, some commentators have claimed that the greater freedom has led to a tendency of greater sensationalism and malpractice by some sections of the media. Such a situation occurs because the implementation of freedom of expression was not followed by a proper sense of responsibility, sufficient professionalism from the journalists and media and an effective legal framework. Therefore, improving professionalism of members of the Press through training programmes including the use of Internet, digital audio-video editing and other ICT-based training will go some way to improve the situation.

In conclusion, **Indonesia like other developing nations are facing many common issues in disseminating information and communication technologies for economic, educational and cultural development.** Some key issues are raising awareness to create a new mindset, legal and regulatory framework suitable for the 21st Century knowledge-based society, building an affordable infrastructure and ICT-tools, creating a competitive investment environment for sustainable ICT development, expanding access-mastery-content of ICTs, human capacity building in all fields of ICT and dealing with the freedom of the Press issues as well as content regulation of the Internet and other mass media.

IV. The Plan of Actions and Expectations

To be undertaken by Indonesia, below are **recommendations for the plan of action require the support from WSIS:**

1. **Strengthening general literacy as well as ICT master-content professionalism** through awareness raising, training and the development of standardization of competency in the field of ICT and media (the Press).
2. Strengthening information access by **developing multi-function Community Telecenters (MCTs)** by creating incentives for the existing telephone kiosks (*wartel*) to become Internet kiosks/cafes (*warnet*) as well as ICT value-added center to support a variety of government, commercial and education activities specifically tailored to meet the needs of the surrounding communities.
3. **Encourage the effective and appropriate use of ICTs** to support the freedom of expression while providing a clear content regulatory framework.
4. To **develop and implement various e-education programmes** in order to ensure the affordability, speed and effectiveness of the learning process as well as the equitable educational opportunities for communities living in rural and remote areas.

In this context, developing countries must develop sustainable and market-based programmes such that assistance from developed countries and donor agencies such WSIS will be a temporary and non-continuous assistance. Such assistance especially in providing catalytic opportunities including technical assistance and various capacity building programmes including training and professional development that will be highly relevant for developing countries.

V. Recommendations to WSIS

1. Confidence and Security in using ICT

- a. **Development of free or cost-effective and appropriate security systems** for developing countries and underdeveloped countries, small islands and countries that undergo economics in transition.
- b. **Promote positive use of the Internet** through capacity building workshops based on local values within a self-regulatory security framework.
- c. **Enforce existing legal provisions at national and international level** to safeguard citizens, including women, from transnational cyber crimes.
- d. **Promote women's involvement** in all aspects of security issues especially at policy making levels.

2. Education

- a. **Support and introduce ICT into school curriculum at the earliest possible opportunity** ensuring equal access to all.
- b. **Conduct and support ICT participatory research** that provides input for education policy formulation, programme evaluation and database creation and ensure that research results are accessible.
- c. **Raise awareness of legislators and policy makers** of the benefits/opportunities of ICT for educational use.
- d. **Formulate a set of global standards or guidelines for mainstreaming gender issues** into educational policies and programmes on ICT.

3. Rural and disadvantaged Groups and small islands

- a. **Provide and develop affordable ICT assets, resources and bandwidth to rural areas** through community access points such as telecenters and others.
- b. **Promote enabling environments in all ICT sectors** to strengthen the use of low cost and open source technologies to facilitate access to information for rural, disadvantaged groups and small islands.
- c. **Provide training on how to incorporate gender perspective** in planning, in building alliance for public and private partnerships and investment in ICT infrastructure, long-term programmes and projects for the rural and, the disadvantaged people, and small islands.
- d. **Identify measurable indicators** to monitor and assess the progress and impact, including social aspect of ICT policies and programmes in improving the quality of life of rural, disadvantaged group and small islands.

4. Synchronizing with UNESCO's and WSIS Programmes

Fostering the equal access to knowledge and information especially for the rural community at the grass root level is very important for development. Such activities should include promotion of multi-lingualism, cultural diversity on the global information network, and the empowerment of the community in using the existing community's telecenter. To increase effectiveness and efficiency, **IFAP (Information For All Programme)**, **IPDC (International Programme for Development Communication)** and **WSIS Programmes** need to be synchronized to include above mentioned to make a greater impact on societies.